REMARKS

The Examiner's Action mailed on October 23, 2006, has been received and its contents carefully considered. Reconsideration of the final rejections presented therein is requested for at least the following reasons. It is respectfully requested that this Amendment be entered after the Final Office Action, as it only amends minor typographical errors in the specification, and does not amend the claims.

In this Amendment, Applicants have editorially amended the specification. Claims 1, 4 and 8 are the independent claims, and claims 1-14 remain pending in the application. For at least the following reasons, it is submitted that this application is in condition for allowance.

Claims 1-14 were rejected under 35 USC §102(e) as anticipated by *Ng et al.* (US 2003/0202270 A1). This rejection is respectfully traversed.

The Office Action contends that ¶[0030] of *Ng et al.* shows that "data is addressed from the disc using a data sector number, and the data sector number is also shown as being comprised as data rearrangement information". ¶[0030] of *Ng et al.* reads as follows:

[0030] FIG. 4 schematically illustrates a portion of a disc **350** that includes portions of multiple consecutive, adjacent concentric round data tracks **352, 354, 356**. The data tracks **352, 354, 356** have corresponding start points **358, 360, 362** that are rotationally displaced relative to adjacent tracks by a track skew angle **364, 366**. The skew angle **364**, for example, is a fixed, low level formatted feature of the disc **350**. The skew angle can't be changed after the disc is assembled into a disc drive. Data can be written on track **354**, for example, starting at an arbitrary sector

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number between a sector numbered "0" to a sector numbered "788." Writing does not have to start at the starting point **360**.

This paragraph merely serves to show that data is written onto a track of a disc **350** starting at an arbitrary sector number. A clearer indication of the operation of the *Ng et al.* invention may be gleaned, for example, by also reading ¶¶[0029] and [0032] thereof, which read as follows:

[0029] FIG. 4 illustrates an embodiment in which there is substantially no read latency L_R (illustrated in FIG. 2) and also substantially no write latency L_W (illustrated in FIG. 3) while sequentially accessing tracks in a disc drive. The arrangement illustrated in FIG. 4 avoids the long write latency L_W even though the starting points of the tracks are skewed for optimized READ operation performance. *In FIG. 4, data to be written on the disc is reordered in a sequence that is different than a consecutive numerical order sequence starting at zero (0) so that the read/write head can start writing data as soon as the read/write head completes its seek operation and is settled long enough to write.* The writing can start at an arbitrary point on a track and there is no need to start writing data at sector zero (0) after the starting point of a track. *The data is reordered by a firmware reordering circuit in a disc drive controller.* A disc that is formatted to optimize read operations, such as disc **250** shown in FIG. 3, can be used without modification, if desired.

[0032] For WRITE operations on the disc **350**, there is also no latency. Single track seek operations as well as head switching operations have different settling times depending on whether a WRITE or a READ operation is being performed. Longer WRITE settling times are needed to ensure that the head is aligned well enough for a WRITE operation. The data of the tracks of a disc drive are skewed according to the READ settling time, which is shorter than the WRITE settling time, to maximize sequential READ performance. *After a read/write head completes a WRITE operation on track **352**, it moves along a path **368** to track **354** to continue with the WRITE operation on track **354**. By the time the read/write head has settled at point **370**, however, the start point **360** has already been passed. Firmware in the disc drive has reordered the data to be written in a new order that starts with data to be written at the next available sector, which in this example is sector number 7 on track **354**. The read/write head begins writing at sector number 7 and there is no write latency.*

(*emphasis added*)

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This can be seen more clearly with reference to FIG. 4. The reordering contemplated in *Ng et al.* does not in fact result in the data being stored in a rearranged order on the disc (i.e. the "second data storage section"), even if allegedly "based on the data rearrangement information". Instead, the data is reordered in a data reordering circuit so that writing starts in the first available sector, e.g. sector 7 in the example, after allowing for moving to the next track, but with the data that would have been recorded in sector 7 anyway if the data had not been reordered. This is done to save a wasted revolution of the disc **350**, and results in all the data being recorded on the disc in exactly in the same place it would have been even if not reordered in the buffer.

Hence, in *Ng et al.* the reordering of the data is only temporary and does not result in rearrangement of the data as it is appears on the disc. Instead, the data appears on the disc exactly as it would have been if not reordered. That is, the data appears as if it had been written sequentially, even though it is not.

The Office Action contends that "the rearrangement information comprises the pointers of the subsequent data sector contained in each entry of the linked list" **400**, but in fact *Ng et al.* does not store the "data rearrangement information" represented by the linked list **400** on the disc **350**. There is no need to do so, as the data as it appears on the disc is not rearranged but simply sequentially stored. The linked list **400** contains reordering information, which is not the same as

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rearrangement information, because the order of writing is changed by it, but the arrangement of the data on the disc **350** is not.

With regard to claims 1 and 8, the "data rearrangement information" is recited in steps (b) and (c) to be stored in the "stack", which is deemed in the Office Action to be the linked list **400**, and the "second data storage section" is deemed in the Office Action to be the disc **350**. However, data on the disc **350** is <u>not</u> addressed by the reordering information stored in the linked list **400**, because the data on the disc **350** is <u>not</u> rearranged, merely written out of order whilst preserving a sequential arrangement on the disc **350**.

Thus, *Ng et al.* fails to teach or suggest "addressing the data by the data rearrangement information in the second data storage section" as recited in step (d) of claims 1 and 8.

With regard to claim 4, the Office Action deems the buffer **402** of *Ng et al.* to be the "first data storage section".

However, data in the buffer **402** is also not addressed by the reordering information in the linked list **400**. Rather, it is the linked list **400** that determines what is *written to* each place in the buffer **402**, not how it is addressed.

Thus, *Ng et al.* also fails to teach or suggest "addressing the data by the data rearrangement information in the first data storage section" as recited in step (d) of claim 4.

Consequently, independent claims 1, 4 and 8 patentably define over *Ng et al.* and are allowable, together with claims 2, 3, 5-7 and 9-14 that depend therefrom.

Claims 2, 3, 5-7, 9 and 10 were rejected under 35 USC §103(a) as obvious over *Ng et al.* in view of *Jhung* (US 6,304,847 B1). This rejection is respectfully traversed.

As the above claims depend from allowable independent claims 1, 4 and 8, and as *Jhung* fails to remedy the deficiency of *Ng et al.*, these claims are also allowable.

It is submitted that this application is in condition for allowance. Such action and the passing of this case to issue are requested.

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Should the Examiner feel that a conference would help to expedite the prosecution of this application, the Examiner is hereby invited to contact the undersigned counsel to arrange for such an interview.

Should any fee be required, however, the Commissioner is hereby authorized to charge the fee to our Deposit Account No. 18-0002, and advise us accordingly.

Respectfully submitted,

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Date

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